

# Homework 6

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## Contents

Page 251: problem 2

Nutritional Requirements - A rancher has determined that the minimum weekly nutritional requirements for an average-sized horse include 40lb of protein, 20 lb of carbohydrates, and 45lb of roughage. These are obtain from the following sources in varying amounts at the prices indicated:

	Protein (lb)	Carbohydrate (lb)	Roughage (lb)	Cost
Hay (per table)	0.5	2.0	5.0	\$1.80
Oats (per sack)	1.0	4.0	2.0	3.50
Feeding blocks (per block)	2.0	0.5	1.0	0.40
High-protein concentrate (per sack)	6.0	1.0	2.5	1.00
Requirements per horse (per week)	40.0	20.0	45.0	

Figure 1: image.

Formulate a mathematical model to determine how to meeting the minimum nutritional requirements at minimum cost.

Page 264: problem 6

Page 268: problem 6 (i.e., only question #6 in section 7.2)

Page 278: problem 6 (i.e., only question #6 in section 7.2)

Page 284: problem 1

Page 295: problem 3